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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,946	03/02/2004	George Suwala	36765	2173

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THE LAW OFFICE OF KIRK D. WILLIAMS
PO BOX 61538
DENVER, CO 80206-8538

EXAMINER
ALIA, CURTIS A

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/790,946	SUWALA ET AL.	
	Examiner	Art Unit	
	Curtis A. Alia	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 8-22* is/are rejected.

7)☒ Claim(s) *6 and 7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2006 January 13, 2006 January 17.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12-14, 17, and 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claims 12-14, the term "a second protector" is unclear because "a second protector" was previously recited in claim 11, line 6. It is suggested to change "a second protector" to --- the second protector ---.

Claim 17 recites the limitation "the second particular condition." There is insufficient antecedent basis for this limitation in the claim.

For claims 19-20, the term "a second protector" is unclear because "a second protector" was previously recited in claim 18, line 6. It is suggested to change "a second protector" to --- the second protector ---.

For claim 20, the term "a detector" is unclear because "a detector" was previously recited in claim 18. It is suggested to change "a detector" to --- the detector ---.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 4-5, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Finn et al. (US Patent No. 6,728,205 B1).

For claims 1-2, Finn discloses an apparatus comprising a detector (see Figure 1, number 14, APS processor) and a first protector (see Figure 1, number 18, Protection Switching Module) configured to perform protection switching in response to one ore more notifications of a condition received from the detector (see column 42, line 54 to column 43, line 4, failure message arrival at a node), and to register with the detector to be notified of the condition (see column 15, lines 29-35), wherein the detector is configured to receive one or more registration requests from the first protector (see column 15, lines 29-35, "...APS processor receives information concerning the number of nodes..."), and to notify the first protector of the condition upon detection of the condition (see column 15, lines 57-65, "...information concerning the nodes and links and preferred paths among nodes stored in routing table can be accessed and used to re-route automatically the signals through the secondary or protection path..."), wherein the protection switching includes switching the physical path of traffic from a working facility to a backup facility while maintaining an UP state indication of a single logical interface including the working facility and the backup facility such that higher-level routing information does not change in response to the switching the physical path (see column 15, lines 10-13, "...only predetermined logical connections are made between the nodes...," pre-established logical connections are decided on during setup and are maintained while physical paths are switched after a failure).

For claim 4, Fin also discloses the apparatus of claim 1, wherein the protection switching includes switching traffic to a backup component from a component corresponding to the condition (see column 15, lines 58-65).

For claim 5, Finn also discloses the apparatus of claim 1 further comprising a second protector (see Figure 1, other network nodes 12b-12e, each comprising a protection switching module), wherein the second protector is configured to perform protection switching in response to one or more notifications received from the first protector (see column 42, line 67 to column 43, line 4, a node forwards the failure message to other nodes along the paths corresponding to that node), and to register with the first protector to be notified of a particular condition (see column 15, lines 29-35, "…APS processor receives information concerning the number of nodes…," each node's APS processor does this), wherein the first protector is configured to receive one or more registration requests from the second protector (see column 15, lines 29-35, "…APS processor receives information concerning the number of nodes…," each node's APS processor does this), to notify the second protector upon notification of the particular condition (see column 42, line 67 to column 43, line 4, a node forwards the failure message to other nodes along the paths corresponding to that node), and to register with a detector to be notified of the particular condition (see column 15, lines 29-35), wherein the detector is configured to identify the particular condition, and to notify the first protector of the particular condition upon detection of the particular condition (see column 15, lines 57-65, "…information concerning the nodes and links and preferred paths among nodes stored in routing table can be accessed and used to re-route automatically the signals through the secondary or protection path…").

For claim 8, Finn discloses the apparatus of claim 1, further comprising a second protector (see Figure 1, item 12b), wherein the second protector is configured to perform protection switching in response to one or more notifications received from the the first protector and the detector (see column 43, line 67 to column 44, line 4), to register with the first protector to be notified of a particular condition and to register with the detector to be notified of a second particular condition (see column 15, lines 29-35, each node is a protector, and each node must register with all other nodes so that every node has the proper topology in the routing table), wherein the first protector is configured to send a notification of the particular condition to the second protector in response to the notification of the particular condition by the detector (see column 42, line 67 to column 43, line 4, a node forwards the failure message to other nodes along the paths corresponding to that node), and register with the detector to be notified of the particular condition (see column 15, lines 29-35), and wherein the detector is configured to receive one or more registration requests from the first and second protectors (see column 15, lines 29-35, "...APS processor receives information concerning the number of nodes..."), to notify the first protector upon detection of the particular condition, and to notify the second protector upon detection of the second condition (see column 15, lines 57-65, "...information concerning the nodes and links and preferred paths among nodes stored in routing table can be accessed and used to re-route automatically the signals through the secondary or protection path...").

Claim Rejections - 35 USC § 103

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Finn in view of Zettinger et al. (US Patent Application Publication No. 2004/0085895).

For claim 3, Finn teaches all of the limitations with the exception that the protection switching includes switching traffic to a backup facility from a facility corresponding to the condition. Zettinger, from the same field of endeavor, teaches that the same protection switching that occurs on the switch level can be done on a facility level (see paragraph 27, lines 1-8, facility protection switching is when entire protection switch fabrics are protection switched).

Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to include the ability to perform protection switching from a working facility to a backup facility. This is done by having a backup switch fabric connected by a protection switch to be used when a working switch fabric fails. The motivation to combine the teachings of Finn and Zettinger is that switching every node in a facility would take far longer than the 50ms switching time as required in communication networks like those using SONET.

9. Claims 9-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finn in view of Lindskog et al. (US Patent No. 6,665,262 B1).

For claim 9, Finn discloses the apparatus of claim 1, further comprising a second protector (see Figure 1, item 12b), wherein the second protector is configured to perform protection switching in response to one or more notifications received from the first protector (see column 42, line 67 to column 43, line 4, node forwards the failure message to other nodes), and to register with the first protector to be notified of a particular condition, wherein the first protector is configured to receive one or more registration requests from the second protector, and to register with the detector ot be notified of the particular condition (see column 15, lines 29-35), wherein the detector is configured to identify the particular condition and to notify the first protector of the particular condition upon detection of the particular condition (see column 15, lines 58-65).

For claim 9, Finn teaches all of the limitations with the exception that the first protector is further configured to attempt to protection switch upon notification of the particular condition, and in response to the attempted protection switch failing, notifying the second protector of the particular condition, else not notifying the second protector of the particular condition.

Lindskog, from the same field of endeavor, teaches that a fault agent can receive alarm data corresponding to a condition on the network, and upon identifying that it cannot handle the fault, forwards the alarm data to an interconnected fault agent to recover from the fault (see column 3, lines 28-32, fault agent determines if the underlying fault that caused the alarm can be handled at the current node…if not the fault agent produces a new alarm…and passes the new alarm to an interconnected fault agent). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to incorporate a distributed fault recovery scheme into a protection-switching network. Giving each fault agent the configuration parameters required to make the decision as to whether it can fix the fault itself can do this. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 10, Finn discloses the apparatus of claim 1, further comprising a second protector and a third protector (see Figure 1, items 12b and 12c, each node acts as a protector), wherein the second protector is configured to perform protection switching in response to one or more notifications received from the first protector (see column 42, line 67 to column 43, line 4, node forwards the failure message to other nodes), and to register with the first protector to be notified of the condition (see column 15, lines 29-35), wherein the third protector is configured to register with the second protector to be notified of the condition (see column 15, lines 29-35), wherein the second protector is configured to receive one or more registration requests from the third protector (see column 15, lines 29-35).

For claim 10, Finn teaches all of the limitations with the exception that the first protector is configured to determine whether to cause a protection switch or to notify the second protector

of the conditin, the third protector is configured to perform protection switching in response to one or more notifications received from the second protector, and the second protector is configured to determine whether to cause a protection switch or to notify the third protector of the condition. Lindskog teaches that each node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot, then it forwards an alarm message to its interconnected nodes, and they repeat this operation until the fault is recovered from (see column 3, lines 28-34). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. Giving each fault agent the configuration parameters required to make the decision as to whether it can fix the fault itself can do this. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 11, Finn discloses an apparatus comprising a detector configured to detect a particular condition and to notify a first protector of the particular condition (see Figure 1, item 14, APS processor is a detector), and the first processor configured to receive an indication of the particular condition from the detector (see column 15, lines 29-35).

For claim 11, Finn teaches all of the limitations with the exception that the first protector is configured to identify whether to perform protection switching itself baed on the particular condition or to notify a second protector of the particular condition for the second protector to perform the protection switching, and the second protector is configured to receive a notification of the particular condition from the first protector, and in response to perform protection

switching based on the particular condition. Lindskog teaches that each node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot, then it forwards an alarm message to its interconnected nodes, and they repeat this operation until the fault is recovered from (see column 3, lines 28-34). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. Giving each fault agent the configuration parameters required to make the decision as to whether it can fix the fault itself can do this. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 12, Finn teaches all of the limitations with the exception that identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes attempting by the first protector to protection switch, and in response of the protection switch, to notify the second protector of the particular condition. Lindskog teaches that a node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot fix or recover from the fault, then it passes a new alarm message to another node to perform the same operation (see column 3, lines 26-32. Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. Giving each fault agent the configuration parameters required to make the decision as to whether it can fix the fault itself can do this. The motivation for

combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 13, Finn teaches all of the limitations with the exception that identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes referencing a data structure to identify whether a second particular condition has been previously identified by a detector. Lindskog teaches that when an event generator receives information from each node regarding the fault alarm, it collects this data and updates the fault information in an event database, thus allowing nodes to check whether another node has looked at a specific fault (see column 3, lines 56-60). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. The features of Lindskog can be implemented into the network of Finn by incorporating an event generator capable of collecting and organizing information received from all of the nodes' fault agents. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 14, Finn teaches all of the limitations with the exception that identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes referencing a data structure to identify whether a second particular condition is determined based on a fixed or programmed set of rules or user configuration commands. Lindskog teaches that after each node returns information to the event generator, the event generator then sends the updated configuration information to any

subsequent node that is determining whether it can handle the fault, thus dynamically changing the rules for determination at each node (see column 4, lines 5-10). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. The features of Lindskog can be implemented into the network of Finn by incorporating an event generator capable of collecting and organizing information received from all of the nodes' fault agents. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 15, Finn discloses the apparatus of claim 11, wherein the detector is further configured to detect a second particular condition and to notify the second protector of the second condition (see column 15, lines 29-35). The detector can detect more than one condition and send a notification of a condition to all nodes affected by the condition.

For claim 16, Finn teaches all of the limitations with the exception that the second protector is configured to identify whether to perform protection switching itself based on the second particular condition or to notify a third protector of the second particular condition for the third protector to perform protection switching. Lindskog teaches that each node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot, then it forwards an alarm message to its interconnected nodes, and they repeat this operation until the fault is recovered from (see column 3, lines 28-34). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. Giving

each fault agent the configuration parameters required to make the decision as to whether it can fix the fault itself can do this. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 17, Finn teaches all of the limitations with the exception that identifying whether to perform protection switching itself based on the second particular condition or to notify a second protector of the second particular condition is determined based on a fixed or programmed set of rules or user configurable commands. Lindskog teaches that after each node returns information to the event generator, the event generator then sends the updated configuration information to any subsequent node that is determining whether it can handle the fault, thus dynamically changing the rules for determination at each node (see column 4, lines 5-10). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. The features of Lindskog can be implemented into the network of Finn by incorporating an event generator capable of collecting and organizing information received from all of the nodes' fault agents. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 18, Finn discloses an apparatus comprising a detector including means for detecting a particular condition (see Figure 1, APS processor detects a condition on the network from that node or a link connected thereto), and means for notifying a first protector of the particular condition (see column 15, lines 58-65,), the first protector including means for

receiving an indication of the particular condition from the detector (see column 15, lines 57-65, "...information concerning the nodes and links and preferred paths among nodes stored in routing table can be accessed and used to re-route automatically the signals through the secondary or protection path..."), and the second protector including means for receiving a notification of the particular condition from the first protector and means for performing protection switching based on the particular condition (see column 42, line 67 to column 43, line 4, node forwards the failure message to other nodes).

For claim 18, Finn teaches all of the limitations with the exception that the first protector includes means for identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition for the particular condition to perform protection switching. Lindskog teaches that when an event generator receives information from each node regarding the fault alarm, it collects this data and updates the fault information in an event database, thus allowing nodes to check whether another node has looked at a specific fault (see column 3, lines 56-60). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. The features of Lindskog can be implemented into the network of Finn by incorporating an event generator capable of collecting and organizing information received from all of the nodes' fault agents. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 19, Finn teaches all of the limitations with the exception that the first protector includes means for identifying whether to perform protection switching itself based on the

particular condition or to notify a second protector of the particular condition includes means for attempting by the first protector to protection switch and in response to failure of the protection switch, to notify the second protector of the particular condition. Lindskog teaches that a node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot fix or recover from the fault, then it passes a new alarm message to another node to perform the same operation (see column 3, lines 26-32. Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. Giving each fault agent the configuration parameters required to make the decision as to whether it can fix the fault itself can do this. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 20, Finn teaches all of the limitations with the exception that the first protector includes means for identifying whether to perform protection switching itself based on the particular condition or to notify a second protector of the particular condition includes means for referencing a data structure to identify whether a second particular condition has been previously identified by a detector. Lindskog teaches that when an event generator receives information from each node regarding the fault alarm, it collects this data and updates the fault information in an event database, thus allowing nodes to check whether another node has looked at a specific fault (see column 3, lines 56-60). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. The features of Lindskog can be implemented into the

network of Finn by incorporating an event generator capable of collecting and organizing information received from all of the nodes' fault agents. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

For claim 21, Finn discloses the apparatus of claim 18, wherein the detector includes means for detecting a second particular condition and means for notifying the second protector of the second condition (see column 15, lines 29-35). The detector can detect more than one condition and send a notification of a condition to all nodes affected by the condition.

For claim 22, Finn teaches all of the limitations with the exception that the second protector includes means for identifying whether to perform protection switching itself based on the second particular condition or to notify a third protector of the second particular condition for the third protector to perform protection switching. Lindskog teaches that each node comprises a fault agent that is capable of making a decision as to whether it can fix the fault in the network, and if it cannot, then it forwards an alarm message to its interconnected nodes, and they repeat this operation until the fault is recovered from (see column 3, lines 28-34). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to to incorporate a distributed fault recovery scheme into a protection-switching network. Giving each fault agent the configuration parameters required to make the decision as to whether it can fix the fault itself can do this. The motivation for combining the features of Finn and Lindskog is that the recursive way that alarm messages are passed down the hierarchy distributes the work each node has to do to recover from the fault.

Allowable Subject Matter

10. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tanabe (US 5,471,460), Sha (US 6,868,057), Azuma (US 6,430,150), Scrandis (6,694,455), Burr (US 4,701,756), Saleh et al. (US 2002/0054572), Saleh et al. (US 2003/0058804), Opoczynski (US 5,408,462), Ahmad et al. (US 6,359,857).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis A. Alia whose telephone number is (571) 270-3116. The examiner can normally be reached on Monday Through Friday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H. To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

CAA